

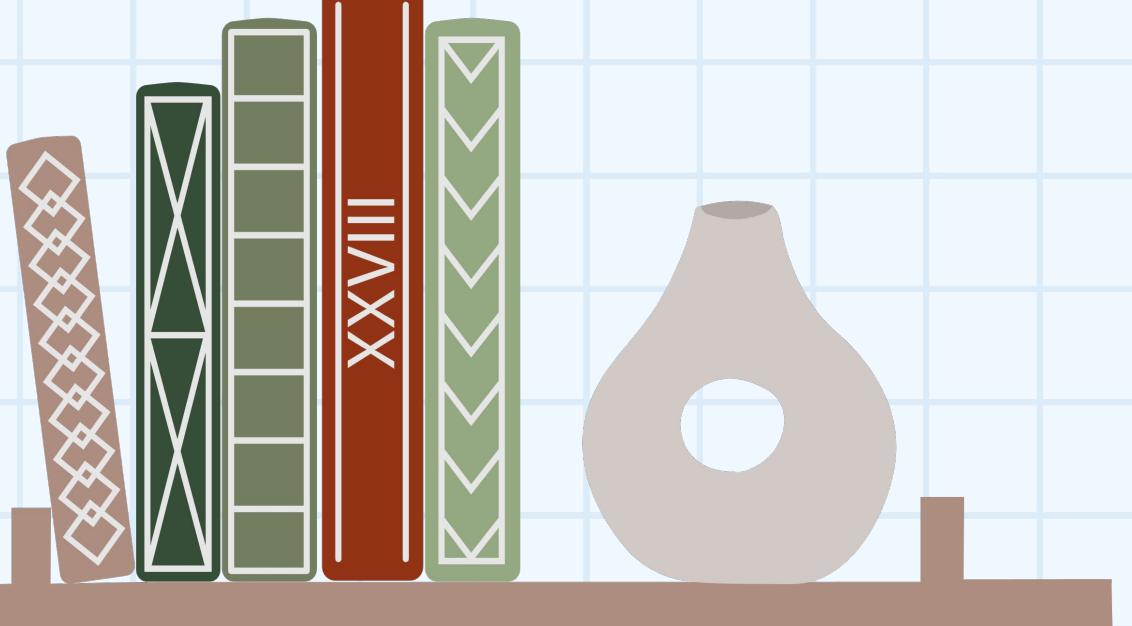
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# BS./BSC.IN

## Applied ai and Data Science

# Basics of Data Analytics





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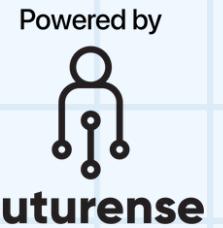
# Let's dive into and learn:



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## Feature Engineering

# Feature Engineering



- After compiling the dataset for your study, you will often need to do an additional step of feature engineering.
- It's a process where we create new features or modify existing ones to better understand our data.
- Often take this step before modeling.
- While preparing the data to feed it to the model in the right format

# Feature Engineering



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- The raw data gives you information evident to you.
- There is usually more information hidden in the raw data.
- Feature Engineering is like being a detective, searching for clues hidden within your data.
- Often, the most crucial insights are not apparent in the raw data.
- It can only be uncovered through feature engineering.



# Feature Engineering

Transaction ID	Purchase Date	Payment Mode
53666	01-02-2025	UPI
54333	12-01-2025	Credit Card
56473	29-01-2025	UPI
56234	05-01-2025	Cash
52876	12-02-2025	Cash
59236	04-03-2025	Credit Card
51852	17-03-2025	Cash
54763	25-01-2025	Credit Card
55368	28-02-2025	UPI
50651	22-03-2025	UPI



# Feature Engineering

Transaction ID	Purchase Date	Payment Mode	Day
53666	01-02-2025	UPI	Saturday
54333	12-01-2025	Credit Card	Sunday
56473	29-01-2025	UPI	Wednesday
56234	05-01-2025	Cash	Sunday
52876	12-02-2025	Cash	Wednesday
59236	04-03-2025	Credit Card	Tuesday
51852	17-03-2025	Cash	Monday
54763	25-01-2025	Credit Card	Saturday
55368	28-02-2025	UPI	Friday
50651	22-03-2025	UPI	Saturday



# Feature Engineering

Transaction ID	Purchase Date	Payment Mode	Day	Weekday/Weekend
53666	01-02-2025	UPI	Saturday	Weekend
54333	12-01-2025	Credit Card	Sunday	Weekend
56473	29-01-2025	UPI	Wednesday	Weekday
56234	05-01-2025	Cash	Sunday	Weekend
52876	12-02-2025	Cash	Wednesday	Weekday
59236	04-03-2025	Credit Card	Tuesday	Weekday
51852	17-03-2025	Cash	Monday	Weekday
54763	25-01-2025	Credit Card	Saturday	Weekend
55368	28-02-2025	UPI	Friday	Weekend
50651	22-03-2025	UPI	Saturday	Weekend



# Feature Engineering



ID	Name	Weight	Height
GH89765	Priya	49	63
RF23876	Rahul	52	61
UT75097	Devesh	68	68
FC37694	Bhavna	51	59
HG87432	Neha	48	66
KT98357	Uday	67	69



# Feature Engineering

ID	Name	Weight	Height	BMI
GH89765	Priya	49	63	19.1
RF23876	Rahul	52	61	21.7
UT75097	Devesh	68	68	22.8
FC37694	Bhavna	51	59	22.7
HG87432	Neha	48	66	17.1
KT98357	Uday	67	69	21.8



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# Futurense

# Feature Engineering



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# Feature Engineering

# Feature Engineering



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- Feature engineering isn't just about technique.
- It is also about understanding your field.
- Domain expertise – knowledge and expertise of a given field – is need to engineer useful features.
- One needs to know what to look for.
- Feature Engineering can be a very useful tool.

# Recap



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## Feature Engineering



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# Thank you

